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ON SOME DEFORMED CYPRÆA TIGRIS FROM THE COLLECTION OF A. DA COSTA GOMEZ.

BY H. A. PILSBRY.

Many years ago the conchologists of Europe were astonished to receive from New Caledonia certain cowries which had the aspect of such well-known species as C. moneta, lynx and mappa, yet differed by the produced and calloused ends, attended with more or less thickening of the enamel and a degree of melanism, or clouding of the color-pattern. Several of these shells were named as distinct species by Crosse, Marie, Montrouzier and others. British writers generally did not admit their validity, considering them pathologic forms, due to some diseased condition of the mantle, a view ridiculed by Crosse in his witty review of G. B. Sowerby's monograph of Cypræa in the Thesaurus Conchyliorum. Mr. S. Raymond Roberts in his monograph¹ treats them as varieties. M. Ph. Dautzenberg has recently discussed these forms, figuring several of them.² The cause of the rostration and hypertrophic deposit of calcareous material has never been really settled, so far as I know, by observations on the living animals. The occurrence of so many forms modified in the same manner, in one locality, points to the action of me specific cause which might perhaps be recognized by an observer on the spot. It seems, however, that the modifications do not have racial significance. A somewhat similar formation characterizes some undoubtedly "good" species elsewhere, such as C. scottii and C. problematica.

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¹ Manual of Conchology, Vol. VII.

² Journal de Conchyliologie, 1906, p. 263. plate ix.

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Mr. A. DaCosta Gomez has called our attention to several New Caledonian examples of *Cypræa tigris* L. in his collection which show a rostration like the New Caledonian forms mentioned above, together with others diversely modified; and as such forms have not, to our knowledge, been noticed in this species, we have figured four of them on plates vii and viii, the two plates representing different views of the same specimens.

I. The upper left hand figures show a shell having a broad chestnut dorsal streak, the rest of the back being clouded with chestnut, light blue and dull pale brown. On the margins may be seen the characteristic dappled coloring of *tigris*. The base is normally colored. At the anterior end there are large callous lumps. The posterior end is also a little produced. Length 83 mm.

II. Upper right figures. This shell is broad and very heavy (weighing $7\frac{1}{8}$ ounces). The dorsal streak is interrupted, chestnut, partially overlaid with bluish callus. Elsewhere it is a soiled cream-white, obscurely and irregularly mottled. The base is stained with yellow around the mouth. The sides are very heavily calloused and lumpy. Length 90 mm.

III. Lower left figures. This shell is heavily calloused and produced at the ends and on the right margin. The spotted *tigris* pattern appears on the other side, but is covered by a dark enamel in the middle of the back. Base white, with some yellowish suffusion in places. Length 98 mm. This shell is characteristically New Caledonian in appearance.

IV. Lower right figures. A broad form, heavily calloused at the sides. The dorsal streak is dark purplish-brown; remainder of the back bluish-white, irregularly mottled and spotted with orange-brown and purple-brown, ends blackish. The base and teeth are brownish-yellow except for a pure white area on the inner lip. Length 85 mm.

ESSEX COUNTY NOTES.

BY REV. HENRY W. WINKLEY.

My last article was an urgent invitation to fellow-laborers to inspect mud. We may now view some results of the inspection.

Just south of Cape Ann, Mass., is a bay with many branches, forming harbors for Marblehead, Salem, Beverly and Danvers. The